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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/632,515 | 08/01/2003 | Eric P. Worden | DP-308386 | 4341 |

7590 05/27/2004

DELPHI TECHNOLOGIES, INC.
Legal Staff
Mail Code: 480-410-202
P.O. Box 5052
Troy, MI 48007-5052

| EXAMINER | |
|---|---|
| NGUYEN, HANH N | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2834 | |

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/632,515 | WORDEN ET AL. | |
| | Examin r | Art Unit | |
| | Nguyen N Hanh | 2834 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspond nce address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on 27 March 2004.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 1-10 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-10 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1,6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. in view of Abukawa et al.

Regarding claim 1, Nakamura et al. discloses an over molded motor stator structure comprising: a stator assembly including a stator core (8 in Fig. 2) comprising a plurality of stator laminations having an internal diameter and an external diameter; and a molded main body formed of a unitizing material encapsulating the stator core assembly to form the over molded motor stator structure (Col. 7, lines 20-60); wherein said stator assembly is encapsulated such that said internal diameter and said external diameter of said stator core are exposed (Fig. 3 and 4). Nakamura et al. fail to show a bobbin assembly comprising a bobbin and a wire coil about the bobbin, said bobbin assembly being assembled to the stator core adjacent the internal diameter

However, Abukawa et al. disclose a stator assembly including a stator core (4 in Fig. 1) and a bobbin assembly (6 in Fig. 1 and 6) comprising a bobbin and a wire coil about the bobbin (Col. 8, lines 65-67), said bobbin assembly being assembled to the stator core adjacent the internal diameter for the purpose of simplifying manufacturing process.

Since Nakamura et al. and Abukawa et al. are in the same field of endeavor, the purpose disclosed by Abukawa et al. would have been recognized in the pertinent art of

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Nakamura et al. by using a bobbin assembly comprising a bobbin and a wire coil to assemble to the stator core as taught by Abukawa et al. for the purpose of simplifying manufacturing process.

Regarding claim 6, Nakamura et al. also disclose an over molded motor comprising; a rotor assembly (Fig. 1) comprising a central rotor portion (2) on a rotor shaft (1), said rotor assembly being adapted for support by bearings (32 and 33) located near end portions of said rotor shaft; said rotor assembly being rotatably disposed into an over molded motor stator structure (8 in Fig. 1) in accordance with Claim 1.

Regarding claims 5 and 10, Nakamura et al. also disclose the over molded motor wherein said over molded motor stator structure is suitable for use as molded without requiring additional machining processes

2. Claims 2,4,7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. in view of Abukawa et al. and further in view of Trago et al.

Regarding claims 2 and 7, Nakamura et al. show all limitations of the claimed invention except showing an over molded motor wherein said molded main body comprises at least one integral motor mounting portion. However, Trago et al. disclose an over molded motor wherein said molded main body comprises at least one integral motor mounting portion (26 in Fig. 1) for the purpose of reducing cost (Col. 2, lines 30-34).

Since Nakamura et al., Abukawa et al. and Trago et al. are in the same field of endeavor, the purpose disclosed by Trago et al. would have been recognized in the pertinent art of Nakamura et al., Abukawa et al. and Trago et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Nakamura et al., Abukawa et al. by forming at least one motor mounting portion intergrally formed with the molded body as taught by Trago et al. for the purpose of reducing cost.

Regarding claims 4 and 9, Trago et al. also disclose the over molded motor wherein said molded main body includes a bearing pocket support (26 in Figs. 2 and 9).

Regarding claims 5 and 10, Trago et al. also disclose the over molded motor wherein said over molded motor stator structure is suitable for use as molded without requiring additional machining processes (the method of forming the device is not germane to the issue of patentability of the device itself, therefore this limitation has not been given patentable weight).

3. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. in view of Abukawa et al. and further in view of Dunning et al.

Regarding claims 3 and 8, Nakamura et al. and Abukawa et al. show all limitations of the claimed invention except showing molded main body comprises at least one integral sensor cavity.

However, Dunning et al. disclose a motor structure wherein the motor cover (31 in Fig. 8) comprise one integral sensor cavity for the purpose of sensing the rotor.

Since Nakamura et al., Abukawa et al. and Dunning et al. are in the same field of endeavor, the purpose disclosed by Dunning et al. would have been recognized in the pertinent art of Nakamura et al. and Abukawa et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Nakamura et al. and Abukawa et al. by forming an integral sensor cavity in the molded main body as taught by Dunning et al. for the purpose of sensing the rotor.

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Information on How to Contact USPTO***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (571) 272-2031. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner 's supervisor, Darren Schuberge, can be reached on (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

May 24, 2004

DANG LE
PRIMARY EXAMINER